Mum's Milk Best for Preemie: Nutritionist

HALIFAX—Their own mothers' milk is the best food for preterm infants, according to a Toronto nutritionist.

Pooled breast milk is inadequate because it results in poorer fat absorption, less desirable protein status and slower body weight gain in low birthweight infants, said Dr. G. Harvey Anderson, professor of nutrition at the University of Toronto.

Dr. Anderson presented his research team's findings on the composition of milk from mothers of preterm infants at a recent infant nutrition seminar here sponsored by H. J. Heinz Co.

The research, sponsored by Heinz and the Hospital for Sick Children Foundation, showed that milk from women who had given birth prematurely was higher in nitrogen and total protein than that from mothers of full-term infants, although the relative composition was the same. About 82% of the total nitrogen was contained in protein, ten percent in small peptides and eight percent in non-protein components, they found.

Preterm milk was also higher in fat and energy, and lower in lactose, he said. Mineral elements—sodium, potassium chloride, calcium, phosphorus and magnesium—were similar in full-term and preterm milks in the first month of lactation, but were higher than that in pooled breast milk.

"We found that mothers of premature infants produce a milk of unique composition and volume", he said in a paper prepared for presentation at the seminar. "It is different from the early milk of the term mothers, and seems to be designed by nature to be appropriate for the growth and development of the premature infant, at best with respect to most nutrients". The only exception seems to be its "unexplainably low" calcium content.

In a clinical trial involving infants weighing 1300 g at birth, those given their own mothers' milk had the "most favorable" protein and amino acid status, compared to babies fed pooled milk or formula. The infants given their mothers' milk also had nitrogen retention rates paralleling intrauterine retention rates, Dr. Anderson said. The poorer nitrogen balance in the group fed pooled milk or formula was due to their lower nitrogen intake, the researchers concluded.

Pediatricians are slowly realizing the inadequacy of pooled milk, Dr. Anderson said. It is often composed of milk produced more than 30 days postpartum—a "mature" stage of lactation—and is variable in nutrient concentration, he explained.

The composition of infant formula has been based on estimates of the term infant's needs—which have been estimated from the composition of milk from women who gave birth at term, he told CFP later.

"No one 'asked' mothers about the preterm infant's requirements", he added. "It was common belief that a mother giving birth at 28-32 weeks gestation wouldn't even produce milk, so researchers didn't bother investigating it because it was thought the volume would be inadequate. But it turns out that she can produce as much milk as a woman who gives birth at term".

Breast Milk Not Always Enough: Prof

HALIFAX—A "significant but small" number of infants may not follow normal growth patterns if they are exclusively breast-fed beyond four months.

Dr. G. Harvey Anderson, professor of nutrition at the University of Toronto, made that statement at an infant nutrition seminar here sponsored by H. J. Heinz Co. last month.

Citing the research of Dr. Ranjit Chandra at Memorial University as well as British reports, Dr. Anderson told CANADIAN FAMILY PHYSICIAN later that physicians and mothers should carefully monitor the growth of infants older than four months whose sole source of nutrition is breast milk.

In a longitudinal study, Chandra found that, of infants who were excluisvely breast-fed, eight percent had fallen to below the tenth centile of average normal infant growth, Dr. Anderson said. By six months, 22% had fallen to below the tenth centile, and by eight months the figure was 33%.

The problem seems to be not that the children were getting less milk than others, but that they needed more, Dr. Anderson explained. The study showed that the volumes of milk the mothers produced was the same. He said Chandra suggested that some children may have higher nutrient requirements than others.

"There's no doubt that breast-feeding is the preferred way of feeding a child", Dr. Anderson commented. "But we should be careful with mothers who are sold on breast-feeding for long periods of time because there are problems of inadequate supply. Although it's a small group, beyond four months the physician and mother should follow the child's growth pattern".

As long as the infants' growth is monitored, he doesn't feel that the findings invalidate the recommendations of the Canadian Pediatric Society that breast milk should be the sole source of nutrition for the first three to six months, and that solid foods are nutritionally unnecessary before the infant is six months old.

In fact, he commented, "We still have a long way to go in encouraging women to breast-feed". In most parts of the country, there is a significant decline in the number of women breast-feeding after six weeks, he noted.

(At the same meeting, Dr. Kathleen Bloom, associate professor of psychology and lecturer in pediatrics at Dalhousie University, said that in her study of 539 mothers delivering healthy, full-term babies in Halifax, 46% initially decided to breast-feed their infants. After six weeks, that figure dropped to 19%. A similar decrease was found in a study of French Canadian women in Montreal by Mary Ellen Thomson and Micheline Brault-Dubuc—see page 1017.)

However, Dr. Anderson added that he wouldn't like to see the recommended age for introducing solids put any farther back than four to six months.